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PATENT
Attorney Docket No. 1222.0034

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application of:)
David A. Russo et al.)
Serial No.: 08/544,212)
(Original Patent 5,401,305 issued)
March 28, 1995, Original Serial)
No. 104,125 filed December 13, 1993)
Filed: October 17, 1995)
For: COATING COMPOSITION FOR GLASS)
Owner of Record: Elf Atochem North)
America, Inc.)

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

REISSUE DECLARATION UNDER 37 C.F.R. § 1.175

We, David A. Russo, Ryan R. Dirkx, and Glenn P. Florczak, the named inventors of the above-identified patent, declare and state as follows:

1. We are the named inventors of U.S. Patent No. 5,401,305 issued March 28, 1995, ("the '305 patent") which relates to a gaseous composition.

2. During the Summer of 1995, we were initially informed that the claims in the '305 patent did not claim the entire scope of our invention. In other words, we have been informed and agree that the '305 patent is partially inoperative because the claims in the '305 patent claim less than what is disclosed in the specification thereof.

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3. In particular, the claims of the '305 patent relate to a gaseous composition adapted to deposit at least a first layer of tin oxide and silicon oxide onto glass at a rate of deposition greater than about 350 Å/seconds. However, the specification of the '305 patent, as well as the specification of the application leading to the '305 patent, disclose a broader gaseous composition. As reflected in the claims attached as Exhibit 1 to this declaration, we believe we are entitled to a broader invention which relates to a gaseous mixture comprising at least one metal oxide precursor and an accelerant, a film comprising at least one metal oxide and an accelerant, and a layer comprising a mixture of at least one metal oxide and an accelerant deposited on a substrate. The subject matter of these claims was not truly pursued in the prosecution of the application leading to the '305 patent and we believe this was based on a misunderstanding or error of the patent counsel for the assignee.

4. This misunderstanding or error, to the best of our knowledge, arose without any deceptive intention on our part, and unfortunately, was not recognized by us until pointed out by patent counsel, namely, Stanley A. Marcus.

5. We acknowledge our duty to disclose to the U.S. Patent and Trademark Office all information known to us which may be material to the patentability of the '305 patent and the new claims attached as Exhibit 1 to this Declaration.

6. We have reviewed and understand the contents of the original and reissue specifications, including the claims, as

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amended by any amendment, including the amendment attached to this Declaration.

7. We believe we are the inventors to the original '305 patent, as well as the claims set forth in the amendment attached to this Declaration for which a reissue patent is sought.

8. The newly presented claims differ from those of the original patent in that the claims of the '305 patent only relate to a gaseous composition comprising a precursor of tin oxide, a precursor of silicon oxide of formula $R_mO_nSi_p$ and an accelerant selected from the group consisting of organic phosphites, organic borates, and water, and mixtures thereof, and a source of oxygen. The original patent claims do not specifically mention a mixture comprising at least one metal oxide and an accelerant, a coated layer comprising the mixture containing the at least one metal oxide and an accelerant, nor do they relate to a gaseous composition comprising at least one precursor of a metal oxide with an accelerant, as was specifically disclosed in the specification of the '305 patent, for instance, at column 4, lines 18-39, column 5, lines 20-45, column 5, lines 58-66, as well as the examples.

9. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may

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jeopardize the validity of the application or any patent issued thereon.

Date: 1/5/96

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David A. Russo

Date: 1/5/96

Ryan R. Dirkx
Ryan R. Dirkx

Date: 1/5/96

Glenn P. Florczak
Glen P. Florczak

28. A gaseous composition comprising at least one precursor of a metal oxide and an accelerant selected from the group consisting of organic phosphites, organic borates, and water.

29. The gaseous composition of claim 28, wherein at least one precursor for a metal oxide is selected from the group consisting of compounds of tin, germanium, titanium, aluminum, zirconium, zinc, indium, cadmium, hafnium, tungsten, vanadium, chromium, molybdenum, iridium, nickel, and tantalum.

30. The gaseous composition of claim 28, further comprising a precursor for a silicon oxide.

31. A gaseous composition comprising a metal oxide precursor and an accelerant selected from the group consisting of phosphites, borates, water, alkyl phosphine, arsine and borane derivatives, PH_3 , AsH_3 , B_2H_6 , O_2 , N_2O , NF_3 , NO_2 and CO_2 .

32. The gaseous composition of claim 31, wherein the metal oxide precursor is a precursor of metal oxides selected from the group consisting of tin oxide, germanium oxide, titanium oxide, aluminum oxide, zirconium oxide, zinc oxide, indium oxide, cadmium oxide, hafnium oxide, tungsten oxide,

vanadium oxide, chromium oxide, molybdenum oxide, iridium oxide, nickel oxide, and tantalum oxide.

33. A film comprising one or more metal oxides and an accelerant.

34. The film of claim 33, wherein said metal oxide is selected from the group of tin oxide, germanium oxide, titanium oxide, aluminum oxide, zirconium oxide, zinc oxide, indium oxide, cadmium oxide, hafnium oxide, tungsten oxide, vanadium oxide, chromium oxide, molybdenum oxide, iridium oxide, nickel oxide, and tantalum oxide.

35. The film of claim 33, wherein said accelerant is selected from the group consisting of phosphites, borates, water, alkyl phosphine, arsine and borane derivatives, PH_3 , AsH_3 , B_2H_6 , O_2 , N_2O , NF_3 , NO_2 and CO_2 .

36. The film of claim 33, wherein said accelerant is triethylphosphite.

37. The film of claim 33, further comprising a silicon oxide.

38. The film of claim 33, wherein said film is amorphous.

39. An article comprising a substrate and a film of claim 33 deposited thereon.

40. An article comprising a substrate and a film of claim 34 deposited thereon.

41. An article comprising a substrate and a film of claim 35 deposited thereon.

42. An article comprising a substrate and a film of claim 36 deposited thereon.

~~43. An article comprising a substrate and a film of~~
claim 37 deposited thereon.

44. An article comprising a substrate and a film of claim 38 deposited thereon.

45. An article of claim 39, wherein the substrate is glass.

46. An article of claim 39, wherein the film has a refractive index which changes continuously.

47. An article of claim 39, wherein the film comprises a plurality of layers.

48. An article of claim 47, wherein each layer contains a mixture of tin and silicon oxides.

49. An article of claim 48, wherein each layer contains a concentration of tin oxide and silicon oxide different from an adjacent layer.

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